ERFP WG In situ Conservation and valorization of AnGR

Chair: Danijela Bojkovski

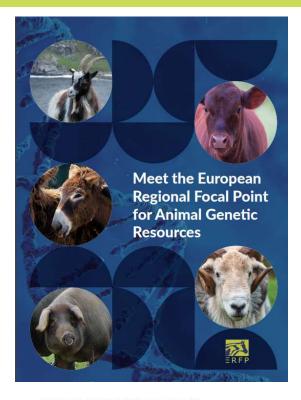


European Regional Focal Point for Animal Genetic Resources





ERFP



European Regional Focal Point (ERFP)

The ERFP for Animal Genetic Resources (ERFP) is the regional platform to support and coordinate actions for the conservation and sustainable use of animal genetic resources (AnGR) in order to facilitate the implementation of FAO's Global Plan of Action for AnGR.

The ERFP mission is driven by the need to safeguard farm animal genetic diversity for future generations, in particular in the global context of food, nutrition security and climate



Video available at:

https://vimeo.co m/589765184/67 81d15b99

Sources of information on AnGR

ERFP manages and maintains two relevant databases to collect information about AnGR and to monitor trends in farm animal genetic diversity in the European region:

 The European Farm Animal Biodiversity Information System (EFABIS) serves as the platform for the exchange of national data provided by the National Coordinators and it's aligned with the FAO Domestic Animal Diversity Information System (DAD-IS).

http://www.fao.org/dad-is/regional-national-nodes/efabis/en/



In situ Conservation

animal breeding populations, where they either have been



Ex situ Conservation

under their normal management conditions, it is classified as "in of reproductive material such as (genebanks) it is classified as "in

Poland

Russian Federation

ERFP members

National Coordinators

North Macedonia

Portugal

Albania Armenia Austria Belarus Belgium Azerbaijan Bosnia-Herzegovina Bulgaria Croatia Czech Republic Denmark Cyprus Estonia Finland France Georgia Germany Greece Iceland Ireland Hungary Israel Italy Latvia Lithuania Malta Luxembourg Netherlands Moldova Montenegro

Serbia Slovakia Slovenia

Romania

Norway

Spain Sweden Switzerland

Turkey Ukraine United Kingdom



Objectives of the WG In situ conservation

Sharing of information related to on-farm conservation,

success stories and projects









14:15	Joint meeting with WG Documentation Information
	Local breeds landscape management – presentation demonstration cases:
14:30	 Landscape management of Lonjsko polje nature park Triglav national park and local breeds Local breeds landscape management in Germany Local breeds conservation on Stara Planina, Serbia
	Presentation of the cases on the added value arguments:
	3MC Nordic Mountain Cattle – Culture and Genetic Resources
15:30	Ash grey cattle and cheese making
	Ecosystem services - case study from Poland
	Ecosystem services – case study from Italy
	In memoriam of Laurent Avon

Objectives of the WG In situ conservation

Review legal conditions and financial support

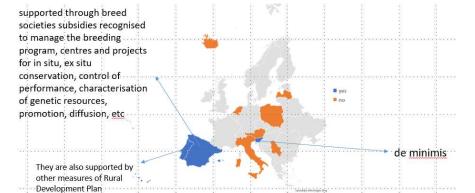
measures

Rural development support measures for Animal Genetic Resources

Results of a survey among European National Coordinators







Objectives of the WG In situ conservation

Support on-farm conservation efforts for transboundary breeds as well as the promotion of the utilization of rare breeds

Leader of the Ad Hoc action:

Eléonore Charvolin-Lemaire / Enrico Sturaro

Report of the ERFP *Ad Hoc* action

Guidelines for Transboundary breeds in Europe

Promote concerted actions between countries

Scientific programme Monday 5 September

Session 01.

Coordination of local and transboundary breed conservation; the role of in situ and ex situ strategies



Objective of the WG In situ conservation

Identification of "added value"-arguments (e. g. cultural heritage, traditional knowledge, ecosystem services, local marketing, organic agriculture) for value chains and landscape

management



TRADITIONAL CHEESE MAKING

Lithuanian cottage cheese is called unripe cottage cheese







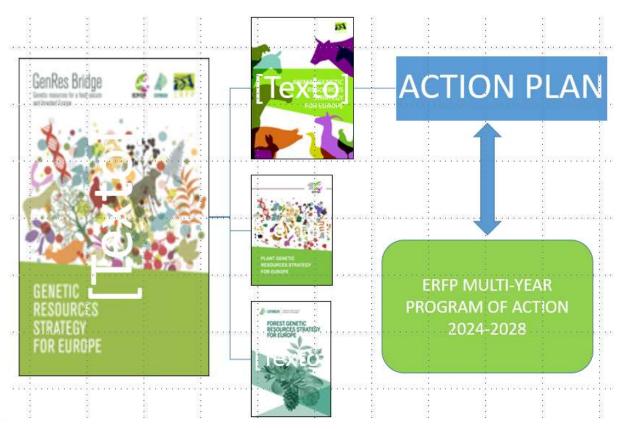




Objective of the WG In situ conservation

Better integration of in situ and ex situ conservation activities in

Europe



Session 01.

Coordination of local and transboundary breed conservation; the role of in situ and ex situ strategies

Members of the WG In situ conservation

Country	Name	Surname
Albania	Kristaq	KUME
Austria	Beate	BERGER
Croatia	Ante	IVANKOVIĆ
Estonia	Sirje	JALAKAS
Finland	Juha	KANTANEN
France	Coralie	DANCHIN-BURGE
Georgia	Tornike	ZHGENTI
Germany	Holger	GÖDERZ
Greece	Dimitrios	TSIOKOS
Hungary	Рарр	DOROTTYA
Iceland	Birna K.	BALDURSDÓTTIR
Italy	Fabio	PILLA
Latvia	Anna	ZELTKOVSKA
Lithuania	Ruta	ŠVEISTIENĖ
Montenegro	Milan	MARKOVIC
Nordgen	Mervi	HONKATUKIA
Norway	Peer	BERG
Poland	Agnieszka	CHEŁMIŃSKA
Portugal	Pedro	VIEIRA
ProSpecieRara	Philippe	AMMANN
Serbia	Srdjan	STOJANOVIĆ
Slovenia	Danijela	BOJKOVSKI
Spain	Jesus	FERNANDEZ MARTIN
Sweden	Per	THUNMAN
The Netherlands	Jack	WINDIG
United Kingdom	Marcus	BATES

- Nomination of experts into the WG can only be done by NC
- NCs are invited to nominate experts at GA
- NC can replace the previous member with new one

Relation to EAAP meeting

The European Federation of Animal Science (EAAP)

Every year, the EAAP (The European Federation of Animal Science) organizes an international meeting which attracts between 900 and



Animal Genetic Resources Working Group

1. Members of the Working Group

The current composition of the Working Group is as follows:

President: P. Berg (Norway)

Vice president: C. Danchin-Burge (France)

Members: I. Curik (Croatia), S.J. Hiemstra (the Netherlands), P. Berg (Denmark), J. Ramljack (Croatia), E. Stuaro (Italy) and G. Hadjipavlou (Cyprus)

Observers: representatives of FAO and ERFP Secretariat



Session 46.

The role of local (plant and animal) resources in the resilience of livestock farming systems

icresources net

Room: Infante

Chair: Poulopoulou / Sturaro Session type: Discovery session

F. Tejerina

Sessic **Book of Abstracts page Theatre Session 46** Ses irces 14:00 Feeding practices and resilience in smallholder systems in Sub-Saharan Africa 493 10:45 Region 114 A.J. Duncan, M. Bezabih, A. Mekasha and S. Oosting Z.I. Duc 14:30 The role of camels as a lever enhancing the pastoral households resilience around N'Djamena (Chad) 494 M.A. Mahamat Ahmat, G. Duteurtre, M.O. Koussou and C.H. Moulin 11:15 Dutch 115 M. Van 14:45 Determine breed proportion and suitable percentage of dairyness in Ethiopian smallholder dairy farm 494 S. Meseret, R. Mrode, J.M.K. Ojango, E. Chinyere, G. Gebreyohanes, A. Hassen, A. Tera, B. Jufar and A.M. Okeyo 11:30 Gene b 115 15:00 Analysis of key typologies for integrated dairy-fodder crop systems in Europe: A NUTS2 approach 495 D. Bojko X. Díaz De Otálora, F. Dragoni, A. Del Prado, F. Estellés, V. Anestis and B. Amon 15:15 Farm to fork: the story of local Israeli 'dairy beef' 495 11:45 Impact 116 M. Cohen-Zinder, E. Shor-Shimoni, R. Agmon and A. Shabtay G.M. Po 15:30 Reducing concentrates supply level in Alpine dairy farms: a consequential-based LCA model 496 12:00 Trends 116 M. Berton, S. Bovolenta, M. Corazzin, L. Gallo, M. Ramanzin and E. Sturaro P. Berg, 15:45 Coffee break 12:15 Conser 16:15 Resilience of animal genetic resources in the face of climate change and extreme events 117 496 R. Baumung, P. Boettcher, C.A. Reising, C. Okore and G. Leroy E. Sosin 16:45 Whole-genome sequencing reveals genes associated with heat tolerance in South African beef cattle 497 K.S. Nxumalo, M.L. Makgahlela, J.P. Grobler, J. Kantanen, C. Ginja, D.R. Kugonza, N. Ghanem, R. Gonzalez-Prendes, A.A. Zwane and R.P.M.A. Crooijmans 10:00 17:00 The role of animal genetic resources in the resilience of livestock farming systems: ERFP experience 497 E. Sturaro, D. Bojkovsky, E. Charvolin, C. Danchin, S.J. Hiemstra, C. Ligda, M. Castellanos Moncho, N. Svartedal and

European reference centre



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Director-General

Brussels SANTE/G2/EC/sc (2022)1539038

Subject: Call for selection and designation of European Union reference centre for endangered animal breeds

Your Excellency,

DEFINITION OF BREEDS

FAO D Several breed categories have already been defined in FAO documents. The guidelines for the development of country reports (FAO, 2000)15 and The legal framework for the management of animal genetic resources (FAO, 2005)¹⁶ defined the following categories:

During the preparation of The State of the World's Animal Genetic Resources for Food and Agriculture (SoW-AnGR) a further classification system was developed as follows.

Local breeds: "breeds that occur only in one country."

Transboundary breeds: "breeds that occur in more than one country. These are further differentiated as: Regional transboundary breeds: transboundary breeds that occur only in one of the seven SoW-AnGR regions 18. International transboundary breeds: transboundary breeds that occur in more than one region."

The main objective of this latter classification system was to avoid the double counting of national breed populations in global and regional statistics. It also provides an indication of the level at which management decisions need to be taken for the respective breeds. The local vs. transboundary classification has subsequently been used in the biennial status and trends reports on AnGR produced by FAO. 19 However, it should be recalled that this classification is based purely on breeds' distributions with respect to national borders; it has no necessary link to the genetic diversity of the livestock populations described or to the characteristics of the respective breeds.

that are used for food and agriculture, or populations undergoing domestication."

Feral populations: "animals are considered to be feral if they or their ancestors were formerly domesticated, but they are now living independently of humans; for example, dromedaries in Australia."

MAIN OBJECTIVE OF THE SURVEY

- New CAP for the period 2023-27
- ERFP WG In situ conservation evaluates the support measures that Member States implement under their Rural Development Plan
- Legal basis: Council Regulation (EC) No. 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) which enable to give support to local breeds in danger of being lost to farmers
- Survey what measures will be taken under the new CAP

Survey (1)

1. Did your country include measures for conservation of local breeds in the new period 2023-27 of CAP/Rural Development Plan (RDP)?				
a) YES				
b) NO				
2. What term is used for the breed native to your country?				
(example: native, indigenous, autochthonous, local)				
Term				
Please provide the definition				

Survey (2)

3. Have you recognized a new native breed in your country in the last 10 years?				
Yes/No				
If »yes«, please describe the process				

4. Council Regulation (EC) No 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) provides financial measures for the conservation of local breeds in danger of being lost to farmers.

Please describe what do you consider as a **local breed in danger of being lost to farming** in your country according to Council Regulation **(EC) No 1305/2013**.

Enter text

Survey (3)

5.	What measures	are proposed for	the conser	vation of	local br	eeds w	ithin ne	w period	2023-
27	of CAP/Rural De	evelopment Plan	(RDP)?						

- a) Annual financial support (payments / subsidies)
- b) Other

6. What are the criteria to be included the CAP/Rural Development Plan (RDP) and receive financial support for the conservation of local breeds?

Criteria for farmers

Criteria for animals / flocks

Survey (4)

7.	. The	list (of bree	eds	eligible	for	financia	I support	must	be p	repared	in e	ach	countr	/ for	the
рі	urpos	e of	CAP/	Rura	al Deve	lopi	ment Pla	an (RDP)).							

Can you explain how the list was prepared and by whom (which institution, or ministry)?

Enter text

8. Can you explain major criteria for a breed to be included in the above mentioned list?

If available, provide a link to the study (eg. program / report / rules) that set up the criteria.

Enter text

- 9. Will the amount of payments change from the previous period?
- a) Yes
- b) No

Survey (5)

- **10.** Will the amount of payments be lower or higher then in previous period?
- a) Higher
- b) Lower
- c) Comment
- 11. Will these financial measures (2023-27) be paid per Livestock Unit* or per animal?

[* Livestock Units should be as defined in EU Commission Regulation (EC) No 1974/2006; For example, in Article 27 and Annex V of this Regulation.]
a) per Livestock Unit*

- b) per animal
- c) other
- **12.** Please indicate which **species** and **local breeds** are eligible for financial support within the CAP/Rural Development Plan (RDP) and indicate the **amount of payments** for males and females (if there are differences).

You may attach an existing document with the requested data or complete the <u>template</u>. Template has to be downloaded, saved, and uploaded.

Survey (6)

- **13**. Are there any other measures / regulations to support the conservation of local breeds in the next (period 2023-27) CAP/Rural Development Plan (RDP)?
- (e. g. payments for the preservation of high-value pastures through grazing of local breeds, organic farming of local breeds, PDO products)
- a) No
- b) Yes
- **14.** Please explain how local breeds are supported by other measures in the next (period 2023-27) CAP/Rural Development Plan (RDP).

Enter text

15. Please enter your contact data

Country:

Preliminary results (1)

Responses

First responses were needed to se where are we.





The term used for the "native" breed

AutochthonousNative

Definition
All special protection breeds originated in Spain with more local nature, that must be preserved as Spanish genetic heritage to boost their expansion and avoid their neglect and extinction due to lack of population and risk factors undergone, with different levels of threat
A breed can only be acknowledged as an Austrian breed if it fulfils the said requirements (Breeding organisation, herdbook) and if it already had a herdbook in Austria before 1938 (continued or discontinued) or if there is ample evidence that the breed has always been present and bred in a part of Austria as it is today (native landrace breeds) or if it stems from the Austro-Hungarian Monarchy and there is ample evidence that the breed has had relations to regions of Austria as it is today (e.g. Racka sheep, Mangalica and Turopolje pigs, Hucul horse).
A breed that was somehow originated long ago in the current territory of the Italian Republic.
CGN for Dutch native breeds: 1) kept in the Netherlands, 2) active breeding organization, 3) at least 40 years AND 6 generations of breeding in the Netherlands.
Breed that has been developed nationally , under the influence of local environmental conditions, and adapted to one or more production / maintenance systems
Local breeds that are officially recognized as autochthonous by the Portuguese authorities
Developed on the territory of Slovenia (based the on historical notes) herdbook has to be established for 50 (30 years)





Results of inquires over email in the past (1)

Country	Definition
Albania	 Authochtonous or native breeds - Animal population belong to ancient races Ecotype - animals of local populations that are breeded in an isolated area Local adapted breeds - Animal populations belong to croosbreed of authochtonous breeds with exotic breeds before 40-50 years ago. Imported breeds and their crosses with local breeds
Austria	A breed can only be acknowledged as an Austrian breed if it fulfils the said requirements (Breeding organisation, herdbook) and if it already had a herdbook in Austria before 1938 (continued or discontinued) or if there is ample evidence that the breed has always been present and bred in a part of Austria as it is today (native landrace breeds) or if it stems from the Austro-Hungarian Monarchy and there is ample evidence that the breed has had relations to regions of Austria as it is today (e.g. Racka sheep, Mangalica and Turopolje pigs, Hucul horse).
Croatia	Named in the policy paper as breed originates at the terittory of Croatia, FAO definition is used
The Netherlands	 commercial and widely used breeds, recently imported breeds, native Dutch breeds. Definition of native Dutch breeds largely based on Alderson et al. criteria, e.g. 40 years + 6 generations bred in the Netherlands without continuous importations from other countries.
Poland	Polish breeds are those that originate from historical Polish territory.
Hungary	Autochthonous breed according to the Animal Breeding Act: Those breeds which were developed in the natural geographical environment of Hungary, and those of which keeping and breeding have historical tradition

Results of inquires over email in the past (2)

Country	Definition
Czech Republic	Autochthonous breed - taxatively named breeds given by the law from 1992, Locally adapted = non autochthonous but kept purebred at least for 4 generations without mixing with another breeds
France	 - Animal genetic resource: any animal, any animal population or material of animal origin containing functional units of heredity of actual or potential value; - Selected animal population: a population of animals that are differentiated from closest populations by a set of identifiable and hereditary characteristics that are the consequence of a specific and reasoned management policy of matings; - Breed: a set of animals that has enough in common to be considered by one or more homogeneous groups of farmers who agree on the organization of breeding renewal and induced trade, including international level; - Local breed: a breed predominantly linked by its origin, place and type of farming to a given territory *; - Small population size breed: a breed with less than a number of females of breeding females to be defined according to the species; - Hybrid genetic type: a set of hybrid or crossbred breeding animals produced by a planned crossbreeding either between pure-bred or of different selected animal populations breeding animals, or between breeding animals which are themselves
	the outcome of a cross between breeds or different selected animal populations, or between pure-bred breeding animals and breeding animals belonging to one or the other of the above categories.
Germany	Animal breeding act Indigenous breeds: a breed is defined as "indigenous"if the original herd-book was established in Germany and has been maintained ever since. A breed can be acknowledged as "indigenous" by the responsible authorities, if the herd-book was not established in Germany but the only herd book for the breed is maintained in Germany and a breeding programme is carried out or a herd-book has been maintained since 1949 in Germany and a separate breeding programme is carried out.



Results of inquires over email in the past (3)

Country	Definition
Latvia	In accordance with Animal breeding law: Farm animal Genetic resources – numerically small breeds and populations with heritage, scientific or economical value. Breed – population of one species that has genetically similar traits.
Norway	 Criteria for being regarded as a native breed in Norway a) The breed shall have been bred in Norway for at least five generations without major import of other breeding material b) If the breed has a sister population (international or national) it can still be regarded as native if: The breed has been genetically isolated without major import of other breeding material The breed has obtained unique traits due to diverging breeding practice compared to the sister population The breed shall have or have had commercial and cultural-historical importance The breed shall not have been so few in number that today's breed only can be regarded as a reconstruction. Definitons and criteria by FAO and EU
Cio Tania	Definitions and effective by FAO and EO
Spain	Breed animal, native Spanish breeds, integrated breeds in Spain , European Union breeds, breeds from third countries, Spanish synthetic breeds, other registered equidae
Sweden	We only differentiate between commercial breeds and rare breeds on numbers.

Results of inquires over email in the past (4)

Definition Country UK Definition of a "native breed" 2 The breed satisfies the criteria for inclusion in the UK National Breed Inventory described above. Breed history documents the breed origin within the UK (including from an amalgamation of native breeds) and the UK has formed the primary environment for the development of the breed. Breed history documents its presence in the UK in its current adapted form for a qualifying period of at least 40 years or 6 generations whichever is the longer period of time. 2 Less than 10% of the aggregate genetic contributions to the population over the qualifying period are derived from other resources distinct from foreign herd books recognised as representing the same breed. 2 A minimum of 80% of the genetic contributions from any generation of ancestors within the qualifying period must come from ancestors that were (i) registered in the breed"s herd book and (ii) born in the UK. An exception to this may be granted as part of an approved conservation scheme. Henceforward, all conservation schemes that may threaten native status should be notified to Defra and the devolved administrations through the Expert Committee for prior approval. Definition of "feral": 12 the breed itself satisfies the criteria for inclusion in the UK National Breed Inventory as defined above; and the breed is not subject to routine handling of any kind; and Immore than 90% of the population have been born to feral parents, over two generations. Definition of "exotic breed at risk": 12 the breed is listed in the UK National Breed Inventory; and

12 the breed does not qualify as a UK native breed; and

It the breed is considered to be "at risk" in a country where it is considered as native.



Recognition of new breeds

	New	
Country	breed?	Procedure
Spain	yes	The National Zootechnical Committee has approved a document with the procedure , requirements and information that must be presented to recognized a new breed that pursue to be inventoried and included in the national catalogue of breeds
Austria	yes	Genomic analysis to differentiate the breed from others (project based), acknowledged breeding organization, herdbook and breeding program
Italy	yes	An herd book was established by the national breeders assocation (ASSONAPA)
The Netherlands	no	
Poland	yes	In Poland, those breeds are recognized as native, the existence of which will be documented by one or more breeding entities (breeding associations) and confirmed by recognized scientific units (scientific institutes, agricultural universities, natural universities) conducting research on this breed.
Portugal	yes	Firstly an institution has to propose the breed to the official authorities . Then, several information about the population including number of breeding animals and breeders, demographic, genetic and morphological characterization supported by technical and scientific study, is required. Finally, the national authority (Dgav) has to decide if the breed is recognized
Slovenia	yes	We recognized two breeds based on the proposal of breeding organizations. One breed was developed in Slovenia (the process of last 30 years) , the other breed was reintroduced from the country which was once the same country (ex Yugoslavia). Breeding organization send proposal for breed recognition to the Ministry, Expert Council confirmed the proposal.



Local breed in danger of being lost to farming according to Council Regulation (EC) No 1305/2013

Country	Definition
Spain	Those breeds which are in serious decline or in the process of disappearing are classified as breeds in danger of extinction , in accordance with criteria established at national or international level
Austria	Has to be an "Austrian" breed, population size below old EU thresholds and/or Ne < 200 (FALCONER)
Italy	An autochthonous breed with a small number of living animals
The Netherlands	Dog, Pig, Rabbit, Birds/Poultry: less than 2000 breeding females & for cattle, horse, sheep and goat: less than 6000 breeding females registered in the breeding programm
Poland	Breeds whose threat status has been recognized and confirmed as endangered, by institutions responsible for the implementation and coordination of the conservation of farm animals genetic resources may be covered by the aid in accordance with the Act. "Journal of Laws of 2021 item 36 of the ACT of December 10, 2020 on the organization of breeding and reproduction of farm animals"
Portugal	It has to be considered: a) the number of breeding females at national level; b) the number and risk status of the breeds , certified by a competent scientific institution; c) registration and updating of herd books by a recognized competent technical institution; d) Identification of animals from endangered breeds at risk of abandonment by institutions with recognized knowledge and skills
Slovenia	All the autochthonous and traditional (locally adapted) breeds falling under the criteria: critical, danger and vulnerable.

Work plan 2022-2023

- Ad hoc action/TF/WG task How is in situ conservation is understood, arranged and perceived in different countries??? Do countries have specific in situ conservation programs/strategies? What are conservation goals, priorities and main actors?
- Ad hoc action/TF/WG task Review of definitions (native/local/national) breed/race in different countries.
- Ad hoc action/TF/WG task -? Identify protected areas and how AnGR conservation contribute to protected areas (landscape management with local breeds). Strengthen the use of local breeds in landscape management and conservation.
- Ad hoc action/TF/WG task Possibilities framework for the European network of in situ conservation.
- Ad hoc action/TF/WG task The characterisation of the traits/features responsible for the adaptation of local breeds. Breed characteristics and features in particular adaptation to specific ecosystems and farming system.....
- Ad hoc action/TF/WG task: Local breed and transhumance in the Alps and in the Mediterranean regions
- Strengthen communication activities, awareness raising messages.

To be approved by the ERFP Assembly

Thank you for your attention!



European Regional Focal Point for Animal Genetic Resources

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photos: IDELE / ERFP Secretariat

